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CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society Of America

Vol. XI NOVEMBER, 1939 No. 5

Dr. R. W. Poindexter's *Rebutia senilis* var. *semperflorus* var. nov. This is not a hybrid for the reason that it is not a seedling but a sport. Illustration shows a grafted plant (see next pg.)

CACTUS AND SUCCULENT JOURNAL

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REBUTIA SENILIS var. SEMPERFLORENS var. nov.

(See illustration on front cover)

Over a year ago I noticed a peculiar offset on a plant of *Rebutia senilis*. Its peculiarity consisted in its being completely covered with a crowded mass of flower buds proceeding from every areole. The offset was grafted, and later propagated by grafting. At all times since, this variety has exhibited the strange peculiarity of being constantly covered with a mass of buds coloring the whole plant a dark purplish red.

Until recently it was grown under glass. Under these conditions it was very rare for any of the buds to actually open. After reaching half size they dried up, and were quickly replaced by new offsets, which in their turn became covered with buds. A short time ago some of the offsets were grafted on vigorous Cereus stock already established out of doors in full sun. Under these conditions not only were the vigor and growth of the plants increased, but numbers of the buds opened into full sized flowers of the bright red color normal to this species.

This peculiar plant has interested me greatly, as it is unique in my experience. In fact it is sufficiently striking to catch the eye of nearly every expert who came near it, and none of them have known of a similar case in the Cactaceae.

The plant itself is in no wise monstrose or cristate though the flowers are occasionally cristate, and is entirely distinct from cristates of the same species, which have also developed from seedlings or offsets of normal plants. It is easy to propagate by grafting, and reasonably healthy although more subject to brown rot than the normal form. No trouble with brown rot has thus far been experienced on plants grown in full sun, as above noted.

R. W. POINDEXTER.

EPIPHYLLUM ORIGINATIONS

EDITOR'S NOTE: In our effort to clearify Epiphyllum nomenclature we wish to encourage the recording of originations so that a plant will have one name only and that the originator may have full credit. We are glad to record your new originations which you feel are worthy additions to this remarkable group. Have you mailed in your list of Epiphyllums as requested on page 18 of the August Journal?

EPIPHYLLUM HYB. LADY IRENE

Parentage: seed of unknown origin.

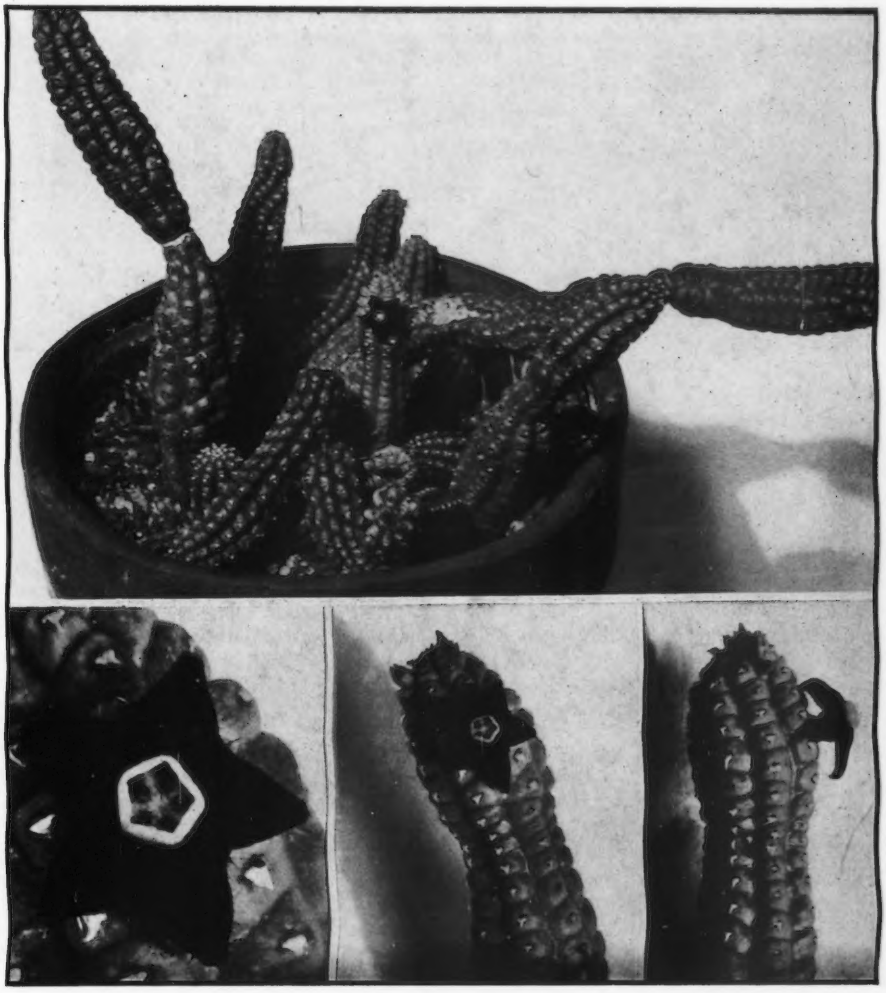
Stems rather stiff and narrow, deeply crenate, light green. Free flowering. Flowers good sized, opening wide, pale flesh pink, a delicate and unusual color; inner petals much crinkled giving crepe effects. Flowers are strongly and pleasingly fragrant, which is unusual in colored varieties. No Epiphyllum flowers so far observed are fragrant in the daytime. This variety, however, retains its evening and night fragrance for two hours after sunrise.

EPIPHYLLUM HYB. MOONRISE

Parentage: EDEN (seed parent) x VIVE ROUGE.

Flowers open nearly flat. The broad, blunt symetrically arranged petals give the flowers the shape of a wheel. Outer petals amber; main petals white, but all except innermost ones tipped with bright yellow. The plant has vigorous stems, mostly triangular, rather heavy, somewhat spiraled. Very free flowering over a long season.

R. W. POINDEXTER.



Photos: B. L. Sloane.

Echidnopsis Sharpei sp. nov.

By Alain White and Boyd L. Sloane

Echidnopsis nostra caulibus prominente tuberculatis, corolla intus profunde velutina-purpurea *Echidnopsem Bentii* N. E. Br. in mentem vocat, a qua lobis corollae ciliatis, colore extus viridi non maculato, lobis coronae interioris incumbentibus, colore coronae exterioris albido satis discedit.

Plant: a branching succulent, dull greyish-green or purplish-green; *stems* up to 14 cm. long, 1 to 1.5 cm. thick, erect or procumbent, cylindric and tessellately 8-angled; *angles* formed of single rows of tubercles, those at the tips bearing at the apex a tiny scale-like leaf, which soon withers but persists;

Flowers: produced 1 or 2 together near the tips of the stems, subsessile;

Sepals: 1.5 mm. long, ovate-lanceolate, acute, glabrous;

Corolla: 1 cm. in diameter; glabrous on the outer surface, deep red on the lower part, greyish-green above, with reddish lines marking where the lobes were joined in bud; deep velvety red on the inner surface, glabrous;

lobes 3 mm. long, slightly reflexed, recurved at the tips, ovate, acute, ciliate with a few simple reddish hairs 1 mm. long and with a few scattered hairs on the tips of the lobes and a fringe of erect simple reddish hairs on the disk surrounding the outer corona;

Outer corona: entire, cup-shaped, 1 mm. high and 2 mm. in diameter, toothed along the edge, with a few short simple yellow hairs on the yellow inner surface, each produced from a minute red spot;

Inner corona: of 5 smooth fleshy oblong lobes, incumbent upon the anthers, yellow.

Type locality: Kenya: 30 miles south of Lake Rudolph. (White and Sloane, No. 445-1).

Distribution: Not further known.

This new *Echidnopsis* was discovered in 1937 by H. B. Sharpe, growing in one small patch among larger plants of the genus *Edithcolea* south of Lake Rudolph in the northern part of Kenya Colony. It is a striking member of the rather unpretentious genus, *Echidnopsis,* at least when in flower, for the buds are of a solid red color at the base outside and immediately attract one's attention, and when the corolla opens its gorgeous red color, contrasting with the white or creamy little outer corona standing erect in its midst like a new collar, is most unexpected and by many will be considered very beautiful.

At first sight the plant makes one think of the mysterious *E. Bentii* N. E. Br., collected by Theodore Bent it is believed in some part of Southern Arabia. The eight tessellately tuberculate angles, each tubercle tipped with a tiny leaf remnant, the velvety purple flowers, and the cup-like outer corona, all these features seem to reappear in our new species. Can it be that *E. Bentii* was not collected in Arabia at all, but on some earlier voyage of Bent to East Africa? This we shall perhaps be long in learning, for material from Arabia is difficult to secure and the type form of *E. Bentii* may not be rediscovered for centuries. But Dr. N. E. Brown had the plant growing at Kew for a while, and whatever its origin his description must be accepted as accurate, so that this new plant cannot claim to represent the same species. While its general effect is much the same, almost every detail is slightly at variance. *E. Bentii* has flowers externally green, spotted with purple; there is no mention of ciliation; the outer corona is acutely 5-angled and purple; and the inner corona has erect, conniving, clavate lobes. The new species, on the contrary, has its corolla lobes ciliate and there is a fringe of hairs on the disk surrounding the outer corona; the campanulate tube is deep purple outside with the lobes green, and there are no spots either on the tube or on the lobes; the outer corona is yellowish, its lobes are not acutely angled and there is a ciliation within the little coronal cup; while the inner corona lobes are incumbent upon the anthers.

Echidnopsis repens sp. nov.

By R. A. DYER *and* I. C. VERDOORN

Echidnopsis repens Dyer & Verdoorn caulibus repentibus 8 – vel 10 - angulatis, corolla circiter 9 mm. diametro atro-rubella, corollae tubo basin versus cupuliforme superne lobos versus gradatim expanso corollae lobis minutissime papilloris margine pilis longis sparsis indutis colore coronae exterioris rubello, coronae interioris lobis brevibus distinguitur.

Plant: a sparsely branched succulent: *stems* prostrate or in the shape of low arches rooting where they come into contact with the soil, subcylindric, 6-9 mm. thick, 8- or 10- angled, tessellately divided into tubercles along the angles; tubercles when young tipped by minute lanceolate leaves;

Flowers arising singly (by abortion) in the furrows between the angles;

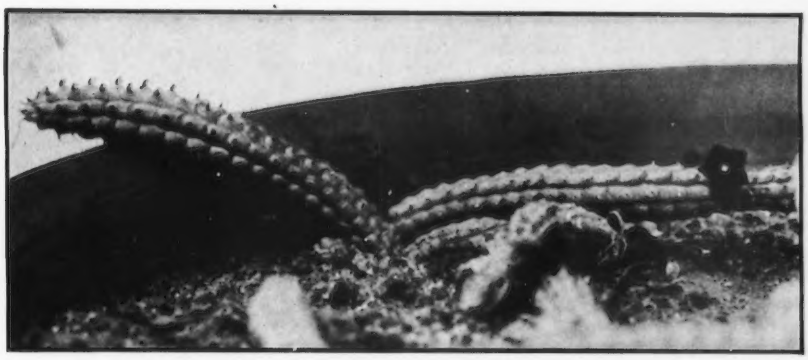
Pedicels 2 mm. long;

Sepals ovate, 1 mm. long;

Corolla in bud flat-topped, apiculate, acutely 5-angled; when nearly fully expanded 9 mm. diam., cupular in the lowest third, gradually expanding above towards the lobes, claret coloured, glabrous on the outer surface, inner surface with a few hairs in the tube surrounding the outer corona and a few long hairs on and near the margin of the minutely papillate lobes; lobes ovate, 3-3.5 mm. long, margin recurved especially at the sinuses forming recurved points, represented in the bud by the acute angles;

Outer corona cupular, equal in height to the cupular basal portion of the corolla and twice the height of the staminal column, obscure 5-angled when young but more obviously so with age, furnish with a few long hairs directed towards the centre, claret coloured except for the white pockets at the base, alternating with the inner corona lobes.

Inner corona lobes united with the wall of the



Echidnopsis repens sp. nov. Dyer & Verdoorn

outer corona, consisting of small stout entire horns which project to the back of the anthers but do not extend over them; anthers fleshy. *Pollinia* resting exposed on the staminal column. *Follicles* slender, broadest below the middle, 3 mm. thick, 4.5 cm. or more long.

Distribution: Tanganyika near Mt. Maru, growing under shrub in volcanic soil, I. B. Pole Evans and J. Erens 1020.

When comparing this plant with the descriptions and figures of the species recorded in White and Sloane, "Stapelieae" 1937, p. 975, it was found to "run" down nearest to *E. Bentii* N. E. Br. with 8-angled stems, but it differs from this Arabian plant in its prostrate habit, shape of the inner corona-lobes, and other details. Its nearest affinity among the African species appeared to be with *E. Virchowii* K. Schum. a rather imperfectly known species with 6 angles. In addition to the number of angles our plant differs also in the colour of the floral parts, in its pubescence, and in the shape of the inner corona-lobes.

But a closer affinity than either of the above is *E. Sharpei* White & Sloane which is also described for the first time in this number. The authors kindly allowed us to study their description and photograph before publication. It will be noted that it agrees to some extent in habit, has 8-angled stems and flowers of a similar size. *E. repens,* however, does not produce a disc on the corolla surrounding the outer corona, the corolla-lobes do not become recurved, they are minutely papillose, the outer corona is entire on the margin, claret coloured and the inner corona lobes are apparently not so far incumbent upon the anthers.

This species was discovered by Mr. J. Erens, the enthusiastic young gardener who accompanied the "Pole Evans Central and East African Expedition," May-September, 1938. He found it near Mt. Maru Tanganyika, growing under a shrub in volcanic soil. One flower was produced on a plant in cultivation at the Division of Plant Industry, Pretoria, January, 1939, and the photograph reproduced here was taken then.

DESIRABLE POT PLANTS

Desirable pot plants in the tribe Cereeae are found in the Mammillarias, and all the Coryphanthanae, Echinocereus, Echinopsis and others in the Echinocerianae, a few of the Echinocactanae, notably Neoporteria, Stenocactus (formerly Echinofossulocactus), Gymnocalycium, Notocactus and the smaller Ferocacti.

In the sub-tribe Cereanae there are also desirable species usually larger plants than in the other sub-tribes, but the following bloom freely and can be cultivated in pots for many years:

Piptanthocereus (Cereus) *alacraportanus* cuttings.

Piptanthocereus peruvianus cuttings.

Monvillea cavendishii cuttings.

Cephalocereus palmeri seedlings or cuttings.

Cephalocereus senilis seedlings or cuttings.

Stetsonia coryne (for appearanly only, not for flowers).

Bergerocactus emoryi.

Wilcoxia sps.—best grafted.

Peniocereus sps.—best grafted.

Nyctocereus serpentinus.

Nyctocereus hirschtianus

Heliocereus speciosus.

Eriocereus martinii.

Eriocereus tortuosus.

Orocereus sps.

Cleistocactus baumannii.

Cleistocactus Straussii.

The Organ Pipe Cactus Farthest North!

JACK WHITEHEAD, Berkeley, California.

Students of Cactology might well occasionally delve into back numbers of the Cactus and Succulent Journal. Recently, in the course of so doing, the writer unearthed an interesting article by Mr. G. A. Frick entitled "Mere Vandalism." The author of the article was aroused at seeing mischevious boys throwing stones at Organ Pipe Cactuses in the Ajo region of Arizona. Mr. Frick erroneously states, "This is the farthest known northern extension of this species of cactus, *Lemaireocereus thurberi*." In the February issue of the JOURNAL, a brief note, gleaned from a Los Angeles newspaper, tells of a still more northern extension of the Organ Pipe Cactus. Lest mere newspaper reporting be regarded as insufficient authority for proper botanical recording of this extension of range, the writer feels justified in explaining, through the erudite *Cactus and Succulent Journal*, the facts.

Although unknown to Mr. Frick, at the time of his article, the farthest known northern extension of this species of cactus, *Lemaireocereus thurberi*, was not in the Ajo region, but in the Picacho Mountains of Arizona. Mr. J. P. Hester, well-known Arizona plant-collector, had, for some time, been aware of the existence of a very fine specimen of Organ Pipe Cactus in an out of the way place in these mountains. How long Mr. Hester had known of this plant the writer is not certain. However, on New Year's Day, 1935, Mr. Hester guided me to this plant, far removed from its fellows farther south.

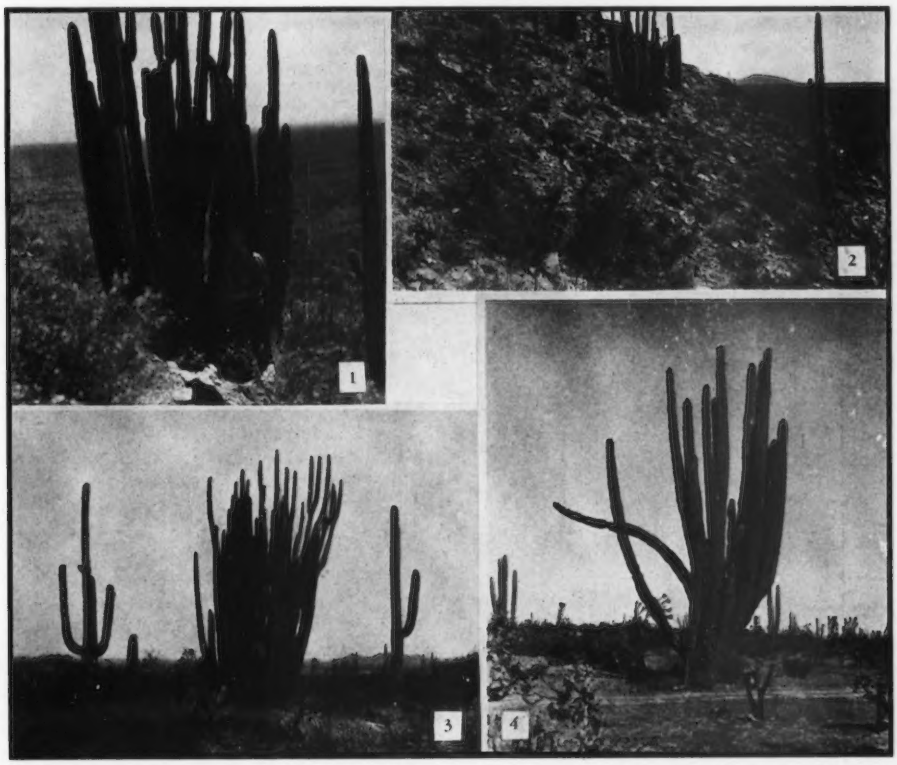
Again, in April, 1937, the writer made a trip to the setting of this Organ Pipe Cactus in the Picacho Mountains. Mr. Charles R. Steen, of Southwestern Monuments Staff, also made the pilgrimage. The real object of revisiting this plant was to show Mr. Steen a large and perfect specimen of *Lemaireocereus thurberi* growing at so great a distance from others of its kind in what is now the Organ Pipe National Monument in the Ajo region of Arizona. There was another reason for wishing to see this plant again. Dr. Ira L. Wiggins, of Stanford University, had reported, in an article published in the JOURNAL, on damage to the Organ Pipe Cactuses of the Ajo region occurring during the disastrous freeze of January, 1937. It was, therefore, surprising to find this most northerly distributed of all known Organ Pipe Cactuses not at all damaged by the freeze.

From Highway 84, near the Southern Pacific Railroad's wayside station of Redrock, about half way between Casa Grande and Tucson, a desert road meanders across cattle guards, over open stretches of sandy wastelands, and through thickets of desert thorn to the base of the Picacho Mountains. The car was here abandoned and a hike of two miles or thereabouts undertaken—after lunch. Over rocks and boulders, everywhere dodging cactus and thorn, the trip might be described as an arduous one. Even so there was enchantment in the scenery and interest in the flora to make a difficult task at least a pleasant one.

The lower desert valleylands are cut through by great washes. These washes, dry at this time of the year, are skirted by such straggling shrubs as Cat Claw (*Acacia greggii*), Desert Thorn (*Lycium fremontii*), Mormon Tea (*Ephedra nevadensis*), and a Franseria (*Franseria ambrosioides*). Lightly scattered shade was furnished by Palo Verde (*Cercidium torreyanum*), Honey Mesquite (*Prosopis velutina*), and Desert Ironwood (*Olneya tesota*). Creosote Bush (*Larrea tridentata*) was by far the dominating large shrub of the area, though quite outnumbered by great colonies of the low compact-habited Desert Leadbush (*Franseria deltoidea*). Flowering annuals, lending color to the desert scene at this time, were plentifully scattered about. It seems odd that so many desert carpeting annuals should be Composites: White Tidy Tips (*Layia glandulosa*) forming circles within the protective shelter of trees and shrubs; often great carpets of two of the dwarfest of desert annuals, *Eriophyllum lanosum* and *Monoptilon bellioides*, both profusely crowned with daisy-like blossoms, the one pure white, the other soft pinkish-purple. Not a Composite, but perhaps more characteristic of desert vegetation in its harsher moods, is the tiny, sprawling, yellowish-green foliaged Turkish Rugging (*Chorizanthe brevicornu*).

The valleylands were soon left behind as gradually the ascent brought us to the crest of the mountains. Over the crest, some little distance down the slope, in an open canyon facing south, the farthest north Organ Pipe Cactus was found flourishing in nearly perfect condition, a bulky mass of over twenty-five stems, the tallest reaching to a height of about twenty feet. The slope of the mountain side is steep, the soil little more than coarse gravel. The outstanding addi-

tional trees of this situation are Male Palo Verde (*Parkinsonia microphylla*) and Ocotillo (*Fouquieria splendens*). Occasionally one might encounter an interesting deciduous shrub known to the plant-loving Mexicans as Sangre de Crista; to botanists as *Jatropha cardiophylla.* When the branches of this shrub are broken to reveal the blood-red sap, the Mexican name is appreciated. Annuals sparsely cover the soil of this arid, inhospitable region: the quaint Chia (*Salvia columbarae*) with its storied purple flowers; *Lupinus sparsiflorus,* the beautiful purple-blue Lupine of the countryside; Wild Heliotrope (*Phacelia crenulata*), also lending a tint of bluish purple. The Salmon Globe Mallow (*Sphaeralcea ambigua*) is one of the outstanding flowering plants of the Picacho Mountains. Usually this plant adorns itself in long spike-like wands of bright salmon-pink flowers but here, on these stony hillsides, are forms flaunting blossoms varying in shade of color from pale lavender to soft deep purple. These beautiful forms have been described by Dr. T. S. Kearney, famed Arizona botanist, as *Sphaeralcea ambigua rosacea.* Grasses are not usual on the drier desert slopes and about the only one here observed was the pretty little Fluff-grass (*Triodia pulchella*). To those not familiar with the Arizona desert in Springtime it may be surprising that there are so many flowering annuals. Perhaps even more surprising it is that ferns and fern-like plants are to be found. But here they flourish nevertheless:



Figs. 1 and 2: *Lemaireocereus thurberi* in the Piacho mountains; this is the most northern extension of this species. Photo by Jack Whitehead. Fig. 3: J. P. Hester's photo of the largest Arizona specimen of *L. thurberi* which he located near the Mesquite mountains, southwest of Covered Well; this specimen is 19 feet high. Fig. 4: B. R. Lewis of Minn. presents his photograph of *Pachycereus pringlei* as one of the world's largest cacti. He says, "This picture was taken a few miles northwest of Calmalli and should be considered when discussing large cacti. This plant was about 50 feet high. As you know, *P. pringlei* stems are very heavy (seems to me a size larger than the average *Carnegiea gigantea*) so that this plant for height and number of stems (about 20) should be pretty large by any classification. Down near Las Animas Bay on the gulf coast there are a few single stems that would run about ten feet taller than this one, but of course, not as bulky. I am sure, however, they will run up to 60 feet tall. The location I had in mind is known as Agua Amarga, I believe, and is a large dried up lake bed with bordering hills."

Parry Cloak-fern (*Notholaena parryi*), Standley Cloak-fern (*Notholaena standleyi*), Lindheimer Lip-fern (*Cheilanthes lindheimeri*), and the Arizona Selaginella (*Selaginella arizonica*), all more or less abundant.

But readers of the JOURNAL will ever be more interested in Cactuses than in other plants. Some of their favorites were found growingly profusely enough near the habitat of the farthest north Organ Pipe Cactus. Observed were two species of Barrel Cactus (*Ferocactus lecontei* and *F. wislizeni*). Platyopuntia seemed best represented by the Engelmann Prickly Pear (*Opuntia engelmannii*); Cylindropuntia did better with the Cholla (*Opuntia fulgida*), the Silver Cholla (*Opuntia bigelovii*), and the Deer Horn Cactus (*Opuntia acanthocarpa*). The latter species was just starting to flower as was the Engelmann Hedgehog Cactus (*Echinocereus engelmannii*). The lordly Sahuaro (*Carnegiea gigantea*) is right at home in the Pacacho Mountains where, giant though it be, it in no way dwarfs the fine solitary specimen of the Organ Pipe Cactus that here is its close associate. From under shrub or boulder, there peeped forth the dainty little Fishhook Cactus (*Mammillaria micracarpa*) modestly uplifting its pretty purple, white-margined, blossoms to the sun.

Lemaireocereus thurberi, the only species of the genus to enter the United States, is rather strictly confined to an area in Arizona just north of the boundary between Sonora and that State. There it is found growing in the Comobati, Quijutoa, and Ajo ranges of mountains. The discovery of this solitary, but very characteristic, specimen plant in the Picacho Mountains, north of Redrock, Pinal County, Arizona, considerably extends the known range of distribution of the Organ Pipe Cactus (*Lemaireocereus thurberi*) to the northward.

Neobesseya rosiflora n. sp.

By MARION SHERWOOD LAHMAN

Plant sparsely cespitose; stems sub-orbicular to short cylindric, blooming size 5-5½ cm. in diam., 5-7 cm. high: tubercles bright green, nearly terete, loosely spaced; spines fine, white, tipped with brown, radials 13-15, two upper hair-like; central, one, fine, appressed upward; areolae elliptic, white-woolly.

Flowers shell-pink, 4 cm. broad; outer segments *entire,* fleshy with long tips, spirally twisted in the bud, inner segments filiform, not stiff, stigmas 4-6, white, filaments deep pink. Flowers April to May.

Fruit crimson, ovate, 7 by 9 mm.; seeds black, pitted, 1½ mm.

Type locality a limestone prairie, eight miles west of Tulsa, Oklahoma. Range known only from type locality.

Type plant in the New York Botanical Garden.

The first plant was discovered by Harold Whitley of Sapulpa, Oklahoma in 1933.

In April, the numerous pink flower-buds make the whole top of the plant look bright pink. The flowers open a little before noon and close about 4 p. m., persisting for several days. The entire outer flower-segments are similar to *N. wissmannii* but that is the only resemblance. Britton and Rose confine the range of the latter to central Texas, five or six hundred miles south of the type locality of *N. rosiflora.*

The color of the flower might suggest the *N. notesteinii* of far Montana, which has a fringed "flower 15-25 mm., ash-gray and pink; centrals when present, tipped with pink." This does not fit *N. rosiflora;* but a 3 dm. mound of *N. similis* in the Tulsa Experiment Garden shows pink on very young spines and has a pinkish-mauve flower, 4 cm. broad.

The plant body of this new species most nearly resembles that of *N. missouriensis;* not so squat, tubercles more widely spaced, brighter green. The latter is common throughout Oklahoma, where it is variable. Some plants are solitary, flat-topped, broader than high with a diameter up to 6 cm. Others are cespitose, forming flat mats of many stems of various sizes. The flowers vary in color from pale green with a mauve stripe to straw or palest yellow with a reddish or dull pink stripe. One plant has pink stripes broad enough to give a pinkish cast to the inner part of the flower. The fringed, outer segments usually are dull. From this, the not fringed, unstriped, pure pink flower of *N. rosiflora* may have developed. Who knows?

A quantity of *N. missouriensis* grows close to the spot where *N. rosiflora* was found.

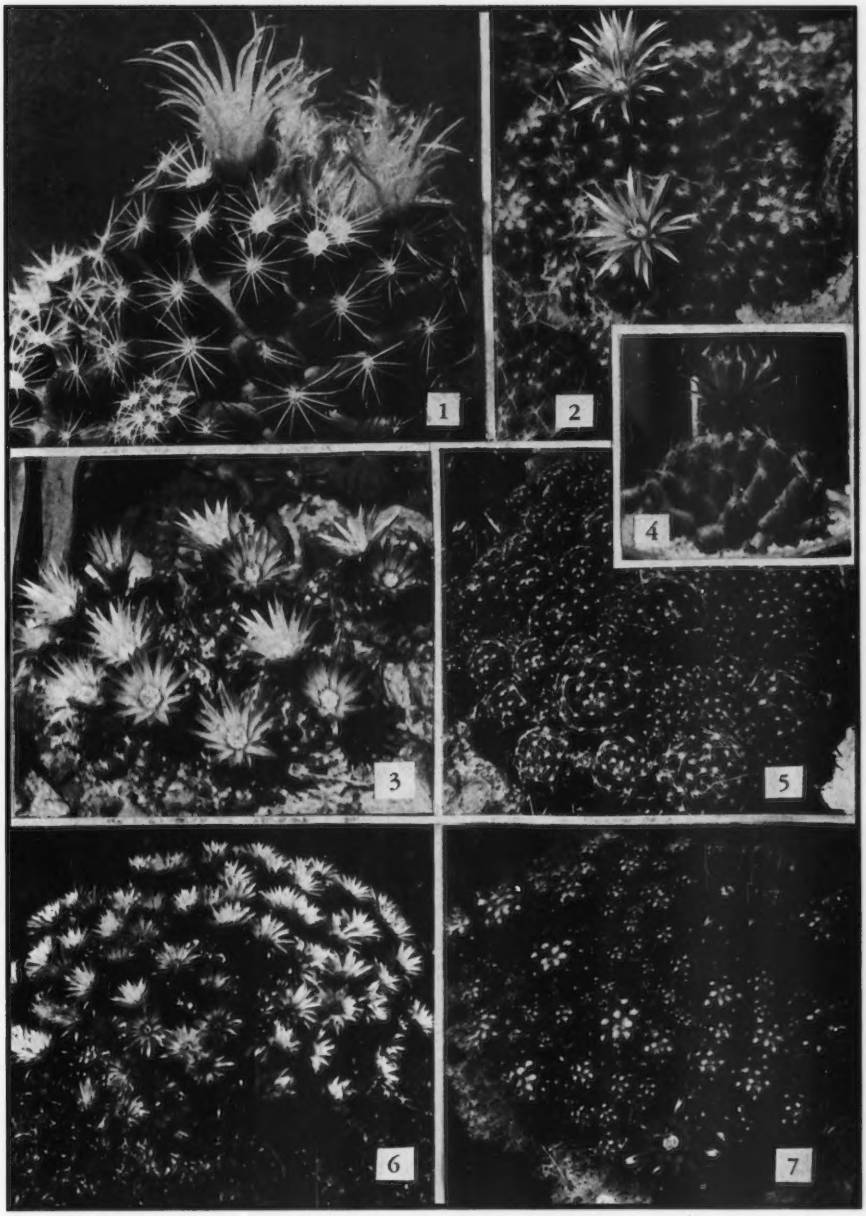


Fig. 1: *Neobesseya rosiflora* n. sp. Fig. 2, 3 and 5: *N. missouriensis*.
Fig. 4: *N. wissmannii*. Fig. 6 and 7: *N. similis*.

Sclerocactus Franklinii sp. nov. Evans. Type plant from one mile east of Delta, Colorado. Photo shows withered flower in front of open ones. x .75.

A NEW SPECIES

By J. WHITMAN EVANS

Sclerocactus Franklinii sp. nov. Evans.

Planta perennis globosa vel oblonga, solitaria, tantum 14 cm. alta, 8 cm. diametra, viridis vel glauca; costae 5-15 mm. altae et latae ad basim, tuberculatae; areolae 5-12 mm. separatim, ovatae, 5-8 mm. longae, albo-lanatae; tomentum areolae 1-6 glandulas roseas vel flavas parvas super spinas celat; spinae centrales 1-3, ascensae vel subporrectae, teretes vel applanatae, nigrae vel cinereae, 1.5-3 cm. longae, rectae vel arcuatae; spinae laterales 7-13, patentes, appressae vel subporrectae, albae vel cinereae, 1-2 cm. longae, teretes et rectae vel applanatae et flexae vel tortuosae; flores 3-4.5 cm. longi, 3-5 cm. lati, tubo 7-12 mm. longo; segminibus perianthii exterioribus obovatis, apiculatis, 8-12, viridibus, marginibus roseis vel albis, 10-15 mm. longis; segminibus interioribus 15-20, 15-30 mm. longis, 3-10 mm. latis, obovatis vel lanceolatis, cilatis, roseis vel albis; staminibus numerosis; fructus oblongus, 1-3 cm. longus, 7-15 mm. latus, glaber, viridioroseus; seminibus 1-3 mm. longis, nigris vel fuscis, minuted tuberculatis.

Usually single, globular to oblong, up to about 14 cm. high and 8 cm. in diameter, but usually about 6 to 8 cm. high and 6 or 7 cm. in diameter; plant body deep dark green to glaucous green in color; ribs 8 to 15, but usually 13, more or less tubercled, spiraling or

nearly vertical, 5 to 15 mm. high and of about the same width at the base, narrowed above; areoles 5 to 12 mm. apart, at the apex of rounded or slightly flattened vertically tubercles 5 to 10 mm. high and 5 to 15 mm. wide at base, near the apex of the plant rounded to ovate, smaller at upper end, 5 to 8 mm. long, filled with white to light grey wool; almost hidden by the wool in these newer areoles are from 1 to 6 pinkish to yellowish glands about 1 mm. in diameter just above the spines; the lower areoles smaller, very slightly felted with dark wool or felt and sometimes nude except for spines, 2 to 5 mm. long, ovate, round, or elliptical; areoles that have flowered are larger at upper end, filled with light to greyish felt or wool and the remains of the fruit with a few seeds; central spines usually 1, but sometimes 2 or 3, ascending or appressed vertically, very rarely or never completely porrect, black to greyish throughout, usually terete or sometimes flattened and twisted, straight or slightly curved near center or end variously, rarely hooked, 1.5 to 3 cm. long; radial spines 7 to 13, spreading, more or less appressed or porrect, most of which are white or grey, tipped with rose or brown, some, especially two of the lower, greyish or brown on the outside, lighter underneath, about 1 to 2 cm. long, terete or sometimes flattened and then usually bent or twisted variously, the others straight or slightly curved or sometimes bent variously, acicular; flowers from nascent areoles, light pink, 3 to 4.5 cm. long, 3 to 5 cm. wide, tube about 7 to 12 mm. long, light green; scales not numerous, green, margins lighter, about 2.5 cm. long and 1.5 to 3 mm. wide, sometimes ciliate; ovary 8 to 15 mm. long, 8 to 10 mm. wide, ovate inside, oblong without or slightly larger near junction with tube, faded green; scales on ovary very few or none at all, 1.5 to 3 mm. wide and 5 mm. long, tufts of white wool present in axils of a few of the scales on both ovary and tube; outer perianth-segments about 8 to 12 in number, 10 to 15 mm. long and 5 to 15 mm. wide, greenish, with light pink to almost white margins, obovate to broadly spatulate, slightly apiculate; inner perianths about 15 to 20 in number, 1.5 to 3 cm. long and 3 to 10 mm. wide, light pink to almost white in color, with lighter margins, obovate to lanceolate, apiculate, slightly ciliate, especially near tips; filaments attached to tube at or near base, about 50 in number, 1 to 2 cm. long, light greenish-white, included within corolla; anthers rectangular to ovate, yellow, 1 mm. long; style greenish-yellow, glabrous, 18 to 24 mm. long, 1.5 to 2 mm. in diameter; stigma-lobes 6 to 10, oblong, 2 to 4 mm. in length, even with, or slightly exserted above anthers; fruit oblong to pyriform, 1 to 3 cm. long and 7 to 15 mm. wide, greenish-pink, deeper pink at base, glabrous, but soon becoming blistered and dry, or drying immediately and becoming light in color; skin or walls very thin, outside color penetration very shallow; scales few, more numerous on upper half, dry; seeds 25 to 100 in each fruit, clustered at base, 1 to 3 mm. long, nearly round, but curved toward hilum and ending sharply beyond hilum, dull black to brown in color with many small tuberculations; hilum small, depressed, light grey.

Type Locality: South rim of the Gunnison Valley, one to two miles East of Delta, Delta County, Colorado, growing in rather poor gravelly soil at an elevation of approximately 5000 feet. The plants are found on the North slopes of the hills, usually in the open but sometimes under protection of bushes or other vegetation. The only other cacti to be found in this area are a few representatives of the genera *Opuntia* and *Pediocactus.*

Distribution: The species is known to occur only at or very near the type locality.

Observations: The species is apparently cespitose only when having been injured, and then usually only three or four joints appear from near the top of the portion remaining. Plants are exceedingly free flowering, the flowers appearing from the top of the plants from March to May, inclusive, opening about 2:00 p. m. and closing after dark (about 7:00 or 8:00 p. m.), individual flowers opening successively for from 3 to 5 days. Plants have been observed in flower when very small, some having been studied bearing a number of flowers notwithstanding the plants were only about 2 cm. in diameter. The fruit is persistent, as also is the perianth, not dehiscing by a basal pore in any of the plants observed, but depending upon weather to loose the seeds. The base of the fruit along with a few seeds is enclosed within the wool of the areole, and these sometime remain for two or three years. Its outstanding characteristic is the small glands in the newer areoles, which exude small drops of a colorless, apparently sweet liquid, which attracts ants and other sweet-eating insects in large numbers.

Distinguished from *Sclerocactus Whipplei* (Engelmann & Bigelow) Britton & Rose chiefly by the glabrous, greenish-yellow style, lighter flower color, usually terete, straight or slightly curved central spines, and the small glands in the areoles, never reported as a characteristic of *S. Whipplei,* nor observed by myself in any of the plants I have seen of that species. It is not closely related to *S. polyancistrus* (Engelmann & Bigelow) Britton & Rose.

The species is named in honor of Mr. A. L. Franklin, of Delta, Colorado, an enthusiastic student of the *Cactaceae,* who sent the type plants to me for identification.

The type specimens have been deposited in the Dudley Herbarium of Stanford University, California, consisting of plant, flower, fruit and seed material, Dudley Herbarium No. 255234.

I am indebted to Dr. Ira L. Wiggins, of the Dudley Herbarium, for the Latin diagnosis appearing herewith. Also to a friend and fellow-enthusiast, Mr. Tom Imler, Jr., of Phoenix, Arizona, for the excellent photograph here reproduced.

The key is as follows:

A revised key to the species of the genus *Sclerocactus* is as follows:

Style puberulent
Style reddish; flower 3 to 4 cm. long.....1. **S. Whipplei**
Style glabrous
Style greenish-yellow; nascent areoles glanduliferous; flowers 3 to 4.5 cm. long.....2. **S. Franklinii**
Style crimson; flower 7 to 8 cm. long.....3. **S. polyancistrus**

NIGHT BLOOMING CACTI

The much abused term "Night blooming Cereus" has been applied to several hundred species of cactus plants and is too vague to have any particular meaning as plants of all the following genera bloom at night: *Cereus, Monvillae, Cephalocereus, Espostoa, Browningia, Stetsonia, Pachycereus, Nyctocereus, Acanthocereus, Trichocereus, Jasminocereus, Harrisia, Eriocereus, Carnegiea, Binghamia, Lophocereus, Hylocereus, Wilmattea, Selenicereus, Mediocactus, Weberocereus,* and *Neoabbottia.*

All of the nocturnal flowers are white shading to pink or yellow, but never with pronounced color as white alone will attract insects at night to pollinate the flowers.

Many species of *Cereus, Espostoa, Acanthocereus, Eriocereus, Hylocereus,* and *Selenicereus* produce edible fruits. *Espostoa* in particular has pinkish white, very sweet fruit that is a staple of diet.

Few of the night flowering cacti are frost hardy and possibly all of them would require glass house care in colder climates, but in warm climates they can be grown in the open or with the protection of a lath house.

The climbing species *Hylocereus* and *Selenicereus* in particular have flowers from five to ten inches in diameter when open and many species produce flowers freely which makes them most desirable.

The Monvillea's and Eriocerei are bushy sprawling plants with large flowers and because of being good pot plants should be desirable for cultivation in the East if taken inside in winter.

In all the islands of the West Indies that I have visited, I have seen plants of *Hylocereus* and *Selenicereus* weighing several tons and possibly over 1000 feet of stems living in mahogany trees where they attach themselves by air roots breaking all connection with the ground and living on the leafmold in the crotches of the tree and the rain water so plentifully supplied in those latitudes. At night such plants open hundreds of immense flowers and make a most impressive sight. They are not parasites, but rather epiphytes like the orchids that co-habit the same trees.

One of the night-blooming species, *Selenicereus grandiflorus* is important in that a valuable heart remedy is made from the mucilaginous juice. This plant is a native of Jamaica.

The soil needed to successfully grow the night-flowering species must be very loose and friable, but quite rich in plant food. A suggested mixture is one-third very crumbly top soil, one-third sand of fairly sharp grain, and one-third leafmold well rotted.

Selenicereus grandiflorus shares with *Hylocereus undatus* the charming name of "Reina de la Noche" in Spanish countries or the equivalent, "Queen of the Night" in America and England. The latter (*H. undatus*) is used as a hedge plant about Punahou College, Honolulu, and when in bloom is visited nightly by hundreds of visitors in cars who direct their headlights on this truly marvelous sight of thousands of immense white flowers.

TEN FAVORITE CACTI

Now, for those just starting, here are a few suggestions and helps. The following list suggested by Mrs. Sella, includes plants with beautiful spines and bloom the longest period of time. They will all grow with ordinary care if given the correct soil mixture and never too much water.

Leuchtenbergia principis.
Oreocereus celsianus.
Astrophytum ornatum.
Astrophytum capricorne var. major.
Echinocactus grandis.
Mammillaria plumosa.
Acanthocereus pentagonus.
Notocactus leninghausii.
Notocactus scopa.
Gymnocalyciums.

PUBLICATION OF NEW SPECIES

The pages of the JOURNAL are open to the publication of new species of cacti and other succulents. The Nomenclature Committee will gladly pass on any new material and make suggestions; new species approved by this group will be so marked. The Committee is not dictatorial and its purpose is to be helpful without the intention to infringe on specialists nor to prevent those having other opinions from publishing their new species in this magazine.

SCOTT E. HASELTON.

John Leasure of El Paso, Texas, has an abundance of *Echinopsis* flowers on plants grown in cans.

TIN CANS VS. CLAY POTS

Discussion conducted by Frank Mark

ADVANTAGES OF POTS

1. Appearance.
2. Better for native California cacti, will dry out quicker.
3. No work in getting them ready to use.
4. No repotting required for exhibition purposes.

ADVANTAGES OF CANS

1. Economy in first cost.
2. No breakage.
3. Permanent if tarred properly.
4. Less room, for same amount of dirt.
   A one quart oil can is slightly less in diameter than a 4 inch pot, yet it holds twice as much dirt—others in proportion.
5. Not top-heavy.
6. Being non-porous, conserves moisture.
7. There being no evaporation, the roots stay warmer, promoting fast growth.
8. Not much loss when given away or traded.

SUGGESTED CANS TO USE

One and five quart oil cans available at any gas station at no cost.

Two-pound coffee cans.

One-gallon fruit cans.

Use round cans only. Square or oblong are unsatisfactory.

PREPARATION OF CANS

Top must be cut *out* and not *off*, this leaves the bead, or seam at the top of the can for stiffness. Remove all oil, paper labels or foreign matter with gasoline or kerosene.

Punch drainage holes, not *in* the bottom, but on the side *at* the bottom. This allows better drainage, also prevents the plants from rooting through into ground.

Dip in hot asphalt or an acid resisting paint. Attach a small wire hook on a short broom handle for dipping. Hook the can through one of the drainage holes and dip *completely*, with top end down.

DIPPING CANS

Boiling hot tar, (asphalt) makes not only the best, but most economical dip.

Somewhat dangerous to use due to terrific heat at boiling point. HEAPS OF CAUTION SHOULD BE USED.

Asphalt comes in 100-pound bags and retails at $1.00 per 100-pounds. Available at any lumber yard. 100-pounds of tar will dip about 600 5-quart oil cans or 1500 quart cans depending on the consistency of the tar, other sizes in proportion. For bare cans, (with no painted labels,) the hotter the tar is, the better. Keep it boiling, less will be used and the tar will drain off the cans quicker and better.

For cans with painted labels such as will be found on oil cans, the tar, if used too hot, will

blister the paint and it will peel off later, taking the tar with it. This can be avoided by thinning the tar with kerosene.

Bring the tar nearly to the boiling point and add one pint of kerosene to each gallon of tar. It is not recommended to heat tar inside of any building, it is much safer to build a fire out in the back yard.

An old white lead or paint bucket, set on some bricks, makes a good tar pot. Keep a piece of sheet metal handy, the tar will sometimes ignite on top and the flames must be smothered by covering the top for a few minutes. This happens frequently when the kerosene is added.

The cans will be found to be somewhat sticky for a few days, if there is objection to this, it can be eliminated by dipping in dry Portland cement.

One man can prepare and dip about 250 to 300 cans in an eight hour day.

FROM OKLAHOMA

At our first meeting in October, we held our annual election and chose the following officers for 1940.

President.....Mrs. S. P. Seela
Vice-President.....Harry T. Johnson
Secretary-Treasurer....Miss Cleta Stubblefield

New members of the Board of Directors are Mrs. Jesse Vandenburgh and Jay E. Gilkey. Jas. H. Hyde was appointed to continue as Parliamentarian. Mrs. C. L. Wiese as Historian-Librarian, and Mrs. Winnie E. Jones Representative to City Garden Clubs Council.

Also the following appointments were made on important standing committees:

Contact, Mrs. Harry T. Johnson; Telephone, Mrs. Jas. H. Hyde; Flower Shows, Mrs. R. A. Chubb; Projects, Mrs. Tom Kelk; Publicity, Mrs. W. J. Phillips; Junior Interests, Tommy Graham.

Work on our new year-book is under way so we will be ready for the New Year fast approaching.

And that reminds us, this young man, Tommy Graham, about fourteen years of age, is a real cactus fan. He knows his plants by name, is regular in attendance and very much interested. We are quite proud of his affiliation with our Society.

At the Oklahoma Fall Flower Show, October 14-15, cacti and other succulents as prizes were awarded in each section, our Society furnishing first prizes and second prizes were gifts from Mrs. Neff Bakkers.

Jay E. Gilkey won first prize in the cactus section and Mrs. Harry T. Johnson was awarded second place. Mrs. Johnson won first in other succulents, the second prize going to Mrs. S. P. Seela.

The plants given were *Cephalocereus chrysacanthus, Hickenia microsperma* crest, *Aloe longiaristata,* and *Crassula arborescens* var. *atropurpureus* cristata. Many ribbons went to other members of our society.

The new book, *Cacti for the Amateur* and *Succulents for the Amateur,* have been added to our Library. We find both quite helpful and interesting.

'Tis time for Jack Frost to pay us a visit here in Oklahoma, so the fall moving spree is in order. Most tender collections are inside already and all others will be soon—or get nipped. Most persons in other localities do not realize that we have to keep most of our plants indoors for over five months, beginning about October 15 to April 15 to be safe from killing frosts, therefore large collections are quite a problem unless one has a glass-house. Many plants are wintered in basements with no water and practically no sunlight all winter and they come through surprisingly well. The greatest care has to be used, however, when they emerge from this winter hibernation as they sun burn very easily and quickly so have to be reintroduced to outdoor living in short periods only at first, gradually increasing the sunshine each day until they are accustomed to it once more.

Our President, Mrs. Jas. H. Hyde and Mr. Hyde, are spending the month of October in the Big Bend regions. We are looking forward to lots of news from that locality on their return in the near future.

"THE CANDID REPORTER."

FROM DENVER

The Denver Cactus and Succulent Society was organized in October, 1938, when a group of collectors met at the home of Mr. and Mrs. Swanson to work out the details incidental to organizing such a Club.

For years these individuals had collected and studied cacti for their own amusement not knowing that anyone else was similarly interested. However, it was inevitable that these ardent cactophiles band together to discuss and study this little known branch of plant life.

Of the twelve original members there are now nine charter members and two new members, namely:

Mr. and Mrs. Kai Villien. Mrs. Villien has a very fine collection of rare plants in her hot water heated greenhouse. She also holds the office of Financial Secretary in the club.

Mr. and Mrs. Allen. Mrs. Allen also has a large collection of rare cacti and Euphorbias together with most of the native Colorado species. Mrs. Allen is second Vice-President and Chairman of the Membership Committee.

Mr. and Mrs. Harold Schomberg. Mr. Schomberg is Vice-President. Mrs. Schomberg is Librarian and a member of the Program Committee. They have a window box collection of rare plants that may be left outside all winter.

Miss Muriel Colburn and Mrs. Colburn have a large collection and a few rare plants growing in attractive rock gardens that affords no end of pleasure. Miss Colburn is Recording Secretary and Chairman of the Program Committee.

Mr. Jack Barker has a mixed collection of rare plants and native plants that number about two hundred. Mr. Barker is President of the Club.

The two new members are Mr. and Mrs. Hollingsworth, who have collected cacti in Texas and have a nice collection.

The Club meets the last Thursday of each month at 7:30 o'clock P. M., at the home of one of the members. The membership fee is $1.00 and dues are fifteen cents a month. Since our inception we have joined the Colorado Federation of Garden Clubs which entitles us to hold our meeting at the Garden Center, a beautiful park addition given over to the Garden Clubs exclusively; also to participate in and enjoy the activities of the Garden Clubs. Most of the members have subscribed to the CACTUS JOURNAL and feel that it is money well spent.

As the winter was long and cold we did little in the way of hunting cacti, but during the summer of 1939, we took many field trips hunting *Neobeyssa missouriensis, Coryphantha vivipara, Pediocactus simpsonii, cristates, Echinocereus triglochidiatus, Echinocereus coccineus, Echinocereus viridiflorus, Opuntias* and *Sclerocacti.* One of the best trips the Club took as a group was in August. We left at daylight for the "badlands" around Red Creek to hunt cliff dweller remains and cacti. Mr. Wakefield, on whose property we

were to hunt, acted as guide and host, showing us the ancient cliff dwellings where we dug for arrow heads and pottery. We found *Opuntia imbricata* very plentiful with hornets or yellow jackets nesting in every plant. Miss Colburn found one crested and promptly dug it up. Harold Schomberg and I found some *O. vivipara* with long white spines unlike the typical red or brown spined variety. No doubt the environment was the cause as this is mostly limestone and sandstone and the sun beats down like a blast furnace all summer. There were several species of Platyopuntia that were profusely spined probably due to the hot dry climate.

The observations made on this trip and at home led us to the conclusion that sun and shade are directly responsible for the spine development on some species of cacti. Next season we hope to take more field trips always with the hope of finding a new species or a rare crest.

We would like to hear from other Clubs or members of other Clubs and although we are a young club you are cordially invited to visit us and our collection.

JACK BARKER, *President.*
626 S. Washington St., Denver.

NEW OFFICERS

At the August meeting of the Midwest Cactus and Succulent Society the following officers were elected to serve for the coming year:

DR. JAMES F. MACHWART, Parma, Ohio, *President.*
MR. JOSEPH TRAPP, Cleveland, Ohio, *Vice-President*
MRS. ANNA VOSS, Cleveland, Ohio, *2nd Vice-President*
MRS. FLORA N. TRAPP, Cleveland, Ohio, *Sec'y.-Treas.*

THE DES MOINES CACTUS AND SUCCULENT SOCIETY

Our membership is now full, that is 24 members. We had our annual election of officers; the officers are as follows: President, Mrs. G. G. Wickliff; Vice-President, Mrs. Carl Singmaster; Corresponding Secretary, Mrs. H. A. Campbell; Recording Secretary, Mrs. Lloyd Jaynes; Treasurer, Mrs. W. G. Crawford; Program Director, Mrs. O. E. Kellar; Librarian, Mrs. E. A. Williams; and Historian, Mrs. R. L. Naylor. We have chaimen for the following committees: City Projects, Field Trips, Social, Telephone, Exhibits, Ways and Means, Plant Exchange, and Year Book. Our Christmas party will include a grab bag; the gifts to be cacti or succulents purchased from some dealer. For the coming year we plan a meeting for each month and include a separate field trip from March through November, the best months for travel in this state. We will continue to use study lessons as furnished by the National Society and contents of the Journal. We will continue to meet at the homes where we can discuss the hostess' plants and help with our own difficulties or diseases in plant raising. We are extending our membership to Iowa and we have already received several memberships from some who have read of the Des Moines Society in their copies of the Journal.

PRESIDENT'S MESSAGE

The Cactus and Other Succulent League of Oakland, California, a group of deeply interested cactophiles, are the newest addition to our growing family of affiliated societies.

Mr. John L. Hastings is the secretary of the League and northern California members are invited to write him at 817 Curtis St., Berkeley, California, with a view of joining this excellent group.

Mr. W. C. Andrews, the President of the League, has been very helpful to the Society in caring for our exhibit at Treasure Island during the Golden Gate International Exposition and in superintending the return of such of our plants as were not presented to the University of California at the close of the Exposition. We are very grateful to Mr. Andrews.

From Cincinnati comes the splendid news that a new wing of the Krohn Conservatory in Eden Park has been constructed to house Cactus and Other Succulents by the Board of Park Commissioners and the official opening November 5th was preceeded by an illustrated lecture on Cactus by our own Ladislaus Cutak, of the Cactus House of the Missouri Botanical Gardens of St. Louis, who was invited by the Board of Park Commissioners to open the new wing.

Mr. A. S. Harmer of Deiringer, Washington, who has contributed those interesting articles to the Journal is busy forming a new affiliated society to be known as the West Washington Cactus and Succulent Society.

The new organization will not interfere with the present valuable affiliation in Seattle, but will appeal to Society members not now members of the Seattle Cactus and Succulent Society.

In Long Beach, California, the outdoor planting of the Long Beach Cactus Club in Bixbee Park is growing each month and the splendid showing of a year ago is more than doubled. If there were any doubt about the interest in Cactus by the general public the large groups of interested visitors to this planting would dispell them.

WM. T. MARSHALL.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912. Of Cactus and Succulent Journal, published monthly at Pasadena, for November, 1939, State of California, County of Los Angeles.

Before me, a notary in and for the State and County aforesaid, personally appeared Scott E. Haselton, who, having been duly sworn according to law, deposes and says that he is the Editor-Publisher of the CACTUS AND SUCCULENT JOURNAL, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Scott E. Haselton, Box 101, Pasadena.

2. That the owner is: CACTUS AND SUCCULENT SOCIETY OF AMERICA, INC., and leased to SCOTT E. HASELTON, who created and published said magazine to date.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None. Cactus and Succulent Society is a non-profit organization and issues no stock.

SCOTT E. HASELTON.

MEMBERS WANTED

Mr. E. J. Schaefer, 1104 N. 26th St., Wilwaukee, Wis., a cactus collector, and member of the Society, is organizing a Cactus Club, taking in women, girls and Junior members—in fact all who are interested in cacti. If you know of any one interested, send him the names and addresses so that he can get in touch with them.

Maihuenia poeppigii—the rarest and most novel of cactaceous plants—75c each, postpaid in the U. S. A. while they last. Proceeds for the Robert Mora fund to be sent to Chili.

W. T. MARSHALL
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150 Seed, 25c; 1,000, 75c; 5,000, $3.00; 10,000, $5.00; 25,000, $10.00; 61,000, $16.50. Complete growing instructions. Postpaid. Our seed from the better Mams.
"THE MOON" CACTUS GARDENS
Glendora, Calif.

BEFORE STORING PLANTS for winter I am offering cuts of my Epiphyllum collection (Phyllocacti) for sale at 20c per cut. With reasonable care they should be plants ready to bloom by spring. Have no catalogue but all are of new or very little known and best varieties. Young plants at 50c each. F. O. B. Los Angeles. H. M. Wegener, Collector of Phyllos. Box 151, San Pedro, Calif. By mail only.

Journal Cactus and Succulent Society, volumes one and two. Unbound. Excellent condition. Offer solicited. Address C. F. Saunders, 580 North Lake Ave., Pasadena, California.

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SPECIAL BARGAINS FOR CHRISTMAS
These prices will hold good 'till January 1, 1940
WHITE HAIRY CACTI—*Echinocereus De Laetii* 2 in., *Mam. plumosa* 1 in., *Ceph. senilis* 1½ in., *Oreocereus cesianus* 1¼ in., *Ceph. palmerii* 2 in., *Mam. hahniana* 1¼ in., *Mam. bocasana* 1½ in., *Opuntia vestita* 5 in., *Oreo. trollii* 1½ in.
Any of the above 4 for $1.00; all 9 for $2.00
Cephalocereus palmerii, white wool, black spines 9 in. $2.00
Cephalocereus chrysacanthus, white wool, yellow spines 9 in. $2.00
Cephalocereus hoppenstedtii, entirely covered with grey spines 9 in., $1.00; 12 in., $2.00
Cephalocereus polylophus, numerous ribs 7 in., $1.00
Cephalocereus senilis, "Old man of Mexico" 11 in., $3.00; 6 in., $1.00
Oreocereus fossulatus, long yellow spines, white wool 12 in., $2.00
Lemaireocereus dumortierii, unique, straw colored spines 7 in., $1.00
Lophocereus schottii mons., The Totem Pole, 5 in to 6 in., $1.00; 9 in., $2.00
Astrophytum myriostigma quadricostatus, four ribbed —the true Bishop's Cap, 2 in., and *Astrophytum senilis,* numerous curled spines, 2 in., $3.00
Ferocactus coloratus, most beautiful of all Feros., wide red spines, 4 in., $1.00; 6 in., $2.00
Agave Victoria Regina, 6 in., $1.00
Faucaria albidens, Faucaria tigrina—Tiger Jaw—*Faucaria lupina*—The Wolfe—*tuberculata*—rare, $1.00
Hoya carnosa—variegata, variegated wax plant, $1.00
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